The works of Brett Nortje part 110.

Tensor.

Originally Posted by **http://en.wikipedia.org/wiki/Tensor**

Tensors *are geometric objects that describe linear relations between vectors, scalars, and other tensors. Elementary examples of such relations include the dot product, the cross product, and linear maps. Vectors and scalars themselves are also tensors.[Note 1] A tensor can be represented as a multi-dimensional arrayof numerical values. The* ***order*** *(also degree) of a tensor is the dimensionality of the array needed to represent it, or equivalently, the number of indices needed to label a component of that array. For example, a linear map can be represented by a matrix (a 2-dimensional array) and therefore is a 2nd-order tensor. A vector can be represented as a 1-dimensional array and is a 1st-order tensor. Scalars are single numbers and are thus 0th-order tensors. The dimensionality of the array should not be confused with the dimension of the underlying vector space.Tensors are used to represent correspondences between sets of geometric vectors; for applications in engineering and Newtonian physics these are normally Euclidean vectors. For example, theCauchy stress tensor* ***T*** *takes a direction* ***v*** *as input and produces the stress* ***T****(v) on the surface normal to this vector for output thus expressing a relationship between these two vectors, shown in the figure (right).*
Because they express a relationship between vectors, tensors themselves must be independent of a particular choice ofcoordinate system. Finding the representation of a tensor in terms of a coordinate basis results in an organized multidimensional array representing the tensor in that basis or frame of reference. The coordinate independence of a tensor then takes the form of a "covariant" transformation law that relates the array computed in one coordinate system to that computed in another one. The precise form of the transformation law determines the type (or valence) of the tensor. The tensor type is a pair of natural numbers (n, m) where n is the number of contravariant indices and m is the number

> *of covariant indices. The total order of a tensor is the sum of these two numbers.*
> *Tensors are important in physics because they provide a concise mathematical framework for formulating and solving physics problems in areas such as elasticity, fluid mechanics, and general relativity. Tensors were first conceived by Tullio Levi-Civitaand Gregorio Ricci-Curbastro, who continued the earlier work of Bernhard Riemann and Elwin Bruno Christoffel and others, as part of the absolute differential calculus. The concept enabled an alternative formulation of the intrinsic differential geometry of a manifold in the form of the Riemann curvature tensor.[2]*

This is a three dimensional object or area withing another object. to find the complete area of the 'thing' you need to use what you have and apply it cubed for area. to find 'space' or 'depth by area,' you need to simply take one tensor cubed and cubed again, yes?

Absolute geometry.


Originally Posted by **http://en.wikipedia.org/wiki/Absolute_geometry**

> ***Absolute geometry is a geometry based on an axiom system for Euclidean geometrywith the parallel postulate removed and none of its alternatives used in place of it.[1]The term was introduced by János Bolyai in 1832.[2] It is sometimes referred to asneutral geometry,[3] as it is neutral with respect to the parallel postulate.***

So, if we were to make axions or rules for the theory, we would be able to make nearly any rule and they don't need to be compatible with the parallel postulate which basically says that the lines will meet up.

Then, we can say that if it was three dimensional, as it would be to be useful, in engineering or science, then we would have three lines closing at an angle of three points to a circle, making it 360 degrees, but three points found

with two at the same distance, and one at a lesser distance, means that there will be two of the same angles in it.

Of course, the actual area of the triangle or angle is where there needs to be [angle + angle + angle] x [angle + angle + angle] = area.

Abstract algebra.

This is where there are two or more types of algebra 'coming into play' or being used to find the answer to something.

If we want to make all types of algebra into the same thing, then we would simply work from right to left, identifying the letters used once, and then finding the values of the others by cross checking them.

For example, if there is [x y z] on one side and [x z] on the other, we can find the value of y by doing the sum on the right then finding the difference.

Abstract analytic number theory.

The fundamental notion involved is that of an ***arithmetic semigroup****, which is a commutativemonoidGsatisfying the following properties:*

- *There exists a countable subset (finite or countably infinite) P of G, such that every element a ≠ 1 in G has a unique factorisation of the form*

$a = p_1^{\alpha_1} p_2^{\alpha_2} \cdots p_r^{\alpha_r}$ *where the pi are distinct elements of P, the αi are positive integers, r may depend on a, and two factorisations are considered the same if they differ only by the order of the factors indicated. The elements of P are called the primes of G.*

- *There exists a real-valued norm mapping* $|\ |$

on G such that

1. $|1| = 1$
2. $|ab| = |a||b|$ for all $a, b \in G$
3. *The total number* $N_G(x)$ *of elements* $a \in G$ *of norm* $|a| \leq x$ *is finite, for each real .*

So, if [x] is greater than zero, and [p] is greater than one, and [a] is less than or equal to [x], and [a] times [b] equals [a] x [b] x [G] then [g] must be one, and then [N] times [g] equals [1N] leaving [x] times [1N] equaling one times [x].

This means that [x] equals [n] so [x] = [2n] or [n] = [2x].

Abstract differential geometry.

As far as i can tell, this is about measuring the 'graviton.' let's see if we can find it this time around?

> Originally Posted by **http://en.wikipedia.org/wiki/Manifold**
>
> *In mathematics, a* ***manifold*** *is a topological space that resembles Euclidean space near each point. More precisely, each point of an n-dimensional manifold has a neighbourhood that is homeomorphic to the Euclidean space of dimension n. Lines and circles, but not figure eights, are one-dimensional manifolds. Two-dimensional manifolds are also called surfaces. Examples include the plane, the sphere, and the torus, which can all be realized in three dimensions, but also the Klein bottle and real projective plane which cannot.Although a manifold resembles Euclidean space near each point, globally it may not. For example, the surface of the sphere is not a Euclidean space, but in a region it can be charted by means of map projections of the region into the Euclidean plane (in the context of manifolds they are called charts). When a region appears in two neighbouring charts, the two representations do not*

> *coincide exactly and a transformation is needed to pass from one to the other, called a transition map.*
> *The concept of a manifold is central to many parts of geometry and modern mathematical physics because it allows more complicated structures to be described and understood in terms of the relatively well-understood properties of Euclidean space. Manifolds naturally arise as solution sets of systems of equations and asgraphs of functions. Manifolds may have additional features. One important class of manifolds is the class ofdifferentiable manifolds. This differentiable structure allows calculus to be done on manifolds. ARiemannian metric on a manifold allows distances and angles to be measured. Symplectic manifoldsserve as the phase spaces in the Hamiltonian formalism of classical mechanics, while four-dimensionalLorentzian manifolds model spacetime in general relativity.*

If a two dimensional manifold is considered a shape, having two vectors, and all the things we are familiar with have three, basically, then we need to look into the fourth dimension to find the graviton, they say. the fourth dimension is a three dimensional shape within a three dimensional shape.

> Originally Posted by **http://en.wikipedia.org/wiki/Singularity_theory**
> *In mathematics, **singularity theory studies spaces that are almost manifolds, but not quite. A string can serve as an example of a one-dimensional manifold, if one neglects its thickness. A singularity can be made by balling it up, dropping it on the floor, and flattening it. In some places the flat string will cross itself in an approximate X shape. The points on the floor where it does this are one kind of singularity, the double point: one bit of the floor corresponds to more than one bit of string. Perhaps the string will also touch itself without crossing, like an underlined 'U'. This is another kind of singularity. Unlike the double point, it is not stable, in the sense that a small push will lift the bottom of the 'U' away from the 'underline'.***

This lacks depth or breadth.

> Originally Posted by **http://en.wikipedia.org/wiki/Abstract_differential_geometry**
> *Mallios and Raptis use ADG to avoid the singularities in general relativity and propose this as a route toquantum gravity.[3]*

Avoiding singularity is a good idea, no two dimensional shape has mass nor substance.

Harmonic analysis.

> Originally Posted by **http://en.wikipedia.org/wiki/Harmonic_analysis**
>
> ***Harmonic analysis** is a branch of mathematics concerned with the representation of functions or signals as thesuperposition of basic waves, and the study of and generalization of the notions of Fourier series andFourier transforms (i.e. an extended form of Fourier analysis). In the past two centuries, it has become a vast subject with applications in areas as diverse as signal processing, quantum mechanics, andneuroscience.The term "harmonics" originated as the ancient Greek word, "harmonikos," meaning "skilled in music."[1] In physical eigenvalue problems it began to mean waves whose frequencies are integer multiples of one another, as are the frequencies of the harmonics of music notes, but the term has been generalized beyond its original meaning.*
> *The classical Fourier transform on **R**n is still an area of ongoing research, particularly concerning Fourier transformation on more general objects such as tempered distributions. For instance, if we impose some requirements on a distribution f, we can attempt to translate these requirements in terms of the Fourier transform of f. The Paley–Wiener theorem is an example of this. The Paley–Wiener theorem immediately implies that if f is a nonzero distribution of compact support (these include functions of compact support), then its Fourier transform is never compactly supported.*

> *This is a very elementary form of an uncertainty principle in a harmonic analysis setting. See also: Convergence of Fourier series.*
> *Fourier series can be conveniently studied in the context of Hilbert spaces, which provides a connection between harmonic analysis and functional analysis.*

So, this is mainly with sound for radios, and, i suspect, satellites also.

If we were to observe the way sounds are transmitted, they are sent through a frequency to another place in a 'wave.' the diagram i was given leads me to believe that they need to be kept in a clear stream, so, making them go directly there would be better than these funny squiggles that i was shown.

Maybe if they were to use more power,t hey could send them with less fluctuations or deviations or like going left and right of center, yes? i suspect the way they travel with has something to do with the way they are sent out, of course.

Now, to get them to get there more as if in a straight line, we would need to send them in a straight line. this means we need to send them through a tube along like a rifle barrel, so they will get the left and right 'jolts' out of them. then, we will see them travel in a straight line for longer before they start changing direction. this can be done with lasers with mirrors, so, we need something that will send out sound waves and keep them going in that line - what reflects sound? i know! why not emit a signal inside the 'barrel' that pushes them together and compacts them to a straight line? this would be like a lot of ripples in a pond pushing together to keep one of the smaller ones staying to the areas where it can still ripple, as more energy means more powerful ripples.

Anthropology.

This is a study of culture in humanity, where sociology is the study of how people interact within psychological parameters - this is more surface level than sociology, i would say.

One of the things that comes to mind with this field of study is how people find different cultures. this is because they live in different areas with different things influencing them. for example, a farmer in the first world i different culturally to a farmer in the third world because of the influence of media on them, or, the difference in temperature. maybe the farmers in the first world would get irrigation, while the third world farmer would do a rain dance.

If you want to know what the people of the area will do at any given time, you need to observe the habitat they live in, optimally, it could be a concrete jungle or something. if there is a land mark, they will gather there and dress appropriately, maybe in dungarees if in florida or gum boots if in the marsh of africa.

Then, there are factors like ways of speaking. this is because they have different languages for example, and they will stress different words in different ways, of course. like, for example, a city that says the same word over and over again will enjoy it less. this could be like "buy" on the stock market, or "hurry" in the street repairmen's way of speaking, of course.

So, the less you say something the more you enjoy saying it, i reckon. if it was that something sounds nice, what makes it sound nice? the sounds of words will always sound nice to all ears - the same words, spoken the same way - with the emphasis on certain syllables and so forth. for example, an african puts the emphasis at the beginning and end of the words, while an english speaker puts emphasis in the middle of the words. this is because the black people in my area would like to get your attention and then leave you with a final impression, while a english speaker would rather be polite at the start and end. The african wants to address the person with a throat clearing of sorts, and the english person wants to be quite to get people to listen, and then needs to keep their attention.

Then, there is also the habitat or surroundings of the culture. if you find yourself out in the bush, say you are in africa, then you will think that everything is smaller than you, so your spine will go forwards a little bit as you look down the whole time. this leads to physical changes of the human form, of course. or, if you live in the forest, you will always be looking up, and that is why europeans usually have a good posture. in the east, you will find that people are usually shorter with a good posture, and this is because of high trees and having to carry heavy loads, crushing their spines. this is all evolution meets habitat, of course.

What about the tone people speak in? in the city, people are used to shouting for attention for their stalls or for the students to listen, or, in the office, when people are not doing their work

properly. in the country, people will speak less forcefully and slower due to the way they approach life.

Then, there is the way people have adapted accents. they will develop a certain way of speaking due to the way others speak. in port cities they will meet many different people speaking this or that way, and sailors have drifted all over the world in their lives. the sailors speak to people that buy their goods and in turn these buyers will speak to the people in stalls there, or, where they used to be selling goods. these people have spread accents all over various cities and therefore they have mixed pressure with eloquence, and the result is a vast array of accents.

The culture of the area might be down to which aspect you are looking at. if you want to know how often there is violence, or how often there is charity, then you need to observe each city uniquely.

Basically, you get gentle or hostile societies. these societies might be as diverse as each suburb you travel through. it could come down to poverty, with the people in need finding ways to satisfy that need no matter what. i mean, if you are without, you will realize that someone else could be you and you them, yes? if you need to steal something, then you probably will to feed yourself in one way or another. this is down to culture also, as, with religion, there might be a personal or social way of dealing with thieves. say you might go to jail, be lynched or even believe that god will punish you. imagine you bring home something to eat and your family asks you where you got it? imagine they reject it through pride? all these things i will shortly explain.

If a society is advanced it is usually harder. this is because the people of the advanced area will be into the fantasies that the media feeds them, straying away from the real needs of man. if the society is gentle and charitable then you will find that the people are grounded in 'the real world,' feeling the pain of others, more in touch with the world, hell their senses work

better when outside getting fresh air and stuff too!

Regarding sin, if someone sins then often they are made an example of in any society. if the people were to decide that they will face a kangaroo court, or merely have to share their spoils with the rest of some shack dwellers, then they will dealt with in this way if caught. the severity of the punishment is down to the overall poverty level of the place! if they are all bloated and hungry, then sharing will be the course of the day, if they are all rather hungry living on minimum wage, then they will have to explain it to the others where they got the money, or be lynched, as the people living there will also have some means to an end and look down on those that do not work, for any reason or other. if it is a rich society, then they report them, as, it is like being told you are soft target by your gardener, yes? if it is a rural setting then there is usually a explanation required, as if it were a minimum wage earning society.

Religion is a sensitive subject for law makers. this is because some of the things found in the bible do not agree with what we practice today. all religions have different ways of prescribed living, but, what makes a people choose a religion?

If you were to observe that all people were either oblivious to or pagan in religion, then you will also find that if a person comes saying there is one true god, the people will agree as if it was their one true king or something. if then they were to hear that this true god was to have laws that they agree with, and about half the world practices this 'one god principle,' then you will see that they also readily agree that these laws are righteous in their eyes.

So, let's take Jesus? he came into a pagan world of rome and created a legacy of miracles and such, winning people over to him and his father. now, if the people find one true god in any culture or region, then they will defend them and accept them, thinking of the punishment of not doing so. if they were to

choose a religion that is logical to them, then they will have had to have had great wisdom explained to them in it.

So, what draws the near east and africa to Allah and the west to Jehova? well, it is all relay culture, where, the parents and established society show the child that it is highly thought of to be a person of certain religions. this is where the habitat itself is showing people what to do, yes?